The substitutes used by the authors were arsenobenzol, kharsivan and arsenobillon, and it was found by them that these substitutes had practically the same therapeutic effect as salvarsan. The same corresponding results were also obtained by using novarsenobenzol or novarsenobillon in place of neosalvarsan. The authors state that the intramuscular or subcutaneous injection of neosalvarsan and its substitutes was found to be superior in immediate therapeutic effect to that of the intravenous injections of salvarsan and its substitutes. Spirochetes disappear from syphilitic lesions just as rapidly after the first intramuscular as after the first intravenous injection, and the Wassermann reaction is more quickly influenced. The only practical disadvantage is the discomfort at the site of the injection caused by the deep subcutaneous or intramuscular use of neosalvarsan. This can be largely avoided by dissolving the dose of neosalvarsan in 1 c.c. of a 4 per cent. stovaine solution and making the amount up to 2 c.c. by creocamph cream which melts at 15° C. In a footnote the authors state that the creocamph cream was later replaced by camphophenique with equally good results and this has proven to be the most comfortable method of injection up to the present. The general reaction which follows an intramuscular injection is much less than after an intravenous. The authors believe that the tonic effect of such intramuscular injections is much greater than when the remedy is administered intravenously.

A Comparison of the Subcutaneous with the Intravenous and Intrathecal Administration of Tetanus Antitoxin in Experimental Tetanus.—GOLLA (*Lancet*, 1917, excii, 686) says that the results obtained by him in animal experiments show the undoubted superiority of the intravenous and intrathecal methods of administering tetanus antitoxin over the subcutaneous. He believes that tetanus antitoxin injected subcutaneously is absorbed too slowly to be available quickly enough to combat the disease.

The Treatment of Syphilis of the Central Nervous System.—HALLER (*Arch. Int. Med.*, 1917, xix, 997) in his article deals with the comparative results obtained in the treatment of cerebrospinal syphilis by mercurialized and salvarsanized serum. He says that a comparison of the efficacy of the two serums in relieving symptoms and in causing objective changes in signs and in the laboratory findings offers more difficulties than are encountered in a comparison of the reactions from treatment. Tables are given in the article showing the comparative effects on the clinical symptoms and laboratory findings. In his conclusions he states that: "The irritating effect in the spinal canal of serum to which mercuric chlorid has been added in the dose of 0.001 gm. is greater than that of 20 c.c. of salvarsanized serum separated from blood drawn thirty minutes after a dose of 0.6 gm. of salvarsan. The average effect on the laboratory findings in the spinal fluid from one dose of mercurialized serum is greater than from one dose of salvarsanized serum. Unpleasant symptoms are more common following intraspinal mercurialized serum than following salvarsanized serum. The greater irritation of the meninges from mercurialized serum prevents as rapid repetition of the dosage as is possible with salvarsanized serum."

Consequently the results at the end of a year of treatment, if each serum were used to the greatest extent consistent with safety, probably would not show such a discrepancy against salvarsanized serum because of the larger number of doses which could be given. He also states that cases of general paresis, meningitis and cerebrospinal syphilis stand intraspinal treatment with mercurialized serum better than do cases of tabes dorsalis. It is particularly in cases of active syphilis of the meninges that the mercurialized serum is useful. Mercurialized serum has an advantage over salvarsanized serum in ease of preparation and in its keeping qualities. For these reasons it can be used under clinical conditions in which the use of salvarsanized serum is impossible, or at least very much more difficult. A comparison of the ultimate results obtained with the individual cases in the two groups is impracticable because of the difference in the total amount of treatment which has been given to the two groups, and also because of the small interval of time which has elapsed since treatment was discontinued, or because many of the group treated with mercurialized serum are still under treatment.

The Effect of Ingestion of Coffee, Tea and Caffein on the Excretion of Uric Acid in Man.—Mendel and Wardell (*Jour. Am. Med. Assn.*, 1917, lxviii, 1815) found that the addition of a strong coffee infusion to a purin-free diet causes a marked increase in the excretion of uric acid. The addition of Kaffee Hag—a decaffeinated coffee product—to a purin-free diet does not cause any increase in the excretion of uric acid. If, however, caffein is added to the Kaffee Hag the excretion of uric acid is decidedly increased, as in the case of coffee. The effect of adding tea to a purin-free diet is similar to that obtained by adding coffee to the same diet. The increase in excretion of uric acid after adding coffee, tea or caffein to a purin-free diet seems to be proportional to the quantity of caffein ingested. The increase in the amount of uric acid excreted under these conditions is equal to the quantity of uric acid which would be obtained by the demethylation and subsequent oxidation of from 10 to 15 per cent. of the ingested caffein. The results of this series of investigations suggest interesting possibilities for further research. Additional experiments should be performed to determine whether or not the increase of uric acid excretion is always directly proportional to the quantity of caffein ingested. At the same time, the purin-base content of the urine should be determined in order to learn whether the increase in uric acid excretion is due directly to the conversion of caffein itself into uric acid or to an indirect stimulation of purin metabolism. The whole question is further complicated by the presence of tannin derivatives in all the beverages under discussion. Earlier observations of a number of authors indicate that the ingestion of tannic acid and tannin causes a decrease in uric acid excretion. On the other hand, others fail to show any such results. This phase of the problem could be settled by detannated coffee being used in place of a decaffeinated product. Finally, it would doubtless prove interesting to perform similar series of experiments with dogs and rabbits in order to study the effect of caffein ingestion on the excretion of uric acid and of allantoin in species in which uric acid is not the prominent normal end-product of purin metabolism.